

NO NET LOSS OF FOREST TASK FORCE

Final Report and Recommendations

January 2009

Executive Summary

A task force was established in 2008 by Maryland Senate Bill 431 to develop a plan to implement a no-net-loss of forests policy for Maryland. The Task Force recognized early in its process that the fact that the Forest Conservation Act (FCA) specifically regulated development also limited the FCA's ability to fully achieve No Net Loss. There are numerous other non-development related factors that also contribute to forest loss and do not offer opportunities for increasing forest acreage. For that reason other programs were discussed and considered, relative to their ability to affect a no-net-loss goal for forests.

Approach: In the course of its work, the task force addressed a series of issues including:

- Findings on the importance of forests to Maryland's economic, social and environmental quality;
- Definition of a no-net-loss policy, including key issues related to baselines, progress measurement and definitions of forest;
- Current trends in forest loss, including current strategic areas of concern and changes in rates of net loss resulting from implementation of Maryland's Forest Conservation Act in 1991;
- Priority mechanisms and policy actions available to achieve a no net loss policy.

During the course of its deliberations, the task force also identified key concerns regarding the importance of maintaining an urban tree canopy. While distinct from forests, urban tree canopy in developed areas provides similar benefits to forest land, especially in regard to the buffering of climate-related impacts and energy consumption rates. Additionally, the task force identified concerns regarding forest quality. A simple quantitative measure of forest retention does not address benefits specific to high quality forest lands or forests located in areas that provide enhanced ecological benefits such as water quality. Actions specific to retaining or replacing forest land to meet quality goals may be needed.

Key Findings:

- Maryland has 41% of its land area, 2.6 million acres, in forest by current measures,.
- Forest cover has been declining for several decades, and loss averaged over 6,000 acres per year between 1986 and 1999. Most of this loss is attributable to land development.
- Implementation of the Forest Conservation Act (FCA) has slowed, but not eliminated, the loss of forest land, with an average of 73% of forests on eligible development projects retained or replaced over the last 15 years. Of the counties reporting, at least an average of 2781 acres of forest were cleared statewide and not replaced annually since 1992. Forest land is also lost to activities and areas exempt from the FCA.
- Other tree planting programs help offset forests lost to other land uses, but currently fall short of the acres cleared. An annual average of 1,168 acres has been planted since 2004.

The task force identified three key areas for intervention:

- Refinements to the Forest Conservation Act that can further slow the net loss of forest land to development;
- Stronger action to support private forest land owners, creating more incentives for private retention of forest land; and
- Enhanced state and local government planting programs to reach a no net loss goal annually.

Key Recommendations:

Improve tracking and definitions for forest cover and urban tree canopy, increasing resolution and timeliness of forest cover data statewide.

Support a statewide Sustainable Forestry Act designed to support use of forests and forest lands in a way and at a rate that maintains their biodiversity, productivity, regeneration capacity, vitality, and their potential to fulfill, now and in the future, relevant ecological, economic, and social functions at local and national levels and that does not cause damage to other ecosystems. The act should address incentives, ecosystem markets, renewable energy policies, forest product markets, education, and outreach.

Modify the Forest Conservation Act to close loopholes, expand eligible projects, and improve effectiveness of mitigation, including the following:

- Reduce forest clearing threshold from 40,000 square feet of clearing to 20,000 square feet for certain exempt activities,
- Expand areas eligible for permanent protection, i.e., long-term protection for all forests remaining after completion of an approved development;
- Eliminate exemptions for Public Service Commission projects, including clearing for new utility corridors and electric generating stations,
- Limit intra-family subdivisions to meet original intent,
- Increase protection for sensitive areas, i.e., require retention and long-term protection of priority areas like stream buffers and wetlands,
- Increase fee-in-lieu minimums and options for mitigation banking locally and regionally,
- Assure ability to properly manage forests,
- Address retrofits for existing paved areas, and
- Reinforce enforcement capabilities.

Modify the Chesapeake Bay Critical Area Law to require some amount of mitigation on non-agricultural sites that are currently not forested.

Improve support and guidance for local government planning to protect forests and other natural areas, and expand local initiatives to support tree planting, urban tree canopy, forest economic priority resource areas, woodland zoning, or other mechanisms to encourage forested working landscapes and retention of green infrastructure. Augment land conservation funding by establishing clear authorization for local jurisdiction bonds or fees for local land conservation, preferably with state matching funding.

Support new tree planting programs such as Marylanders Grow Trees and landowner assistance for tree planting, such as through the 2008 Farm Bill enhancements.

Improve landowner incentives for retaining forests through cost-share, easement programs, tax incentives, improved forest product markets, technical assistance, and development of new ecosystem markets like carbon, water, and energy/biomass.

Task Force Members

Chairman - Eric Schwaab, Deputy Secretary, Maryland Department of Natural Resources
Steve Bunker, The Nature Conservancy
Robert Claggett, Prince George's County Soil Conservation District
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Process

The task force met four times (October 24, November 7, November 24 and December 9, 2008). Staff prepared and presented summaries of the current status of forest land in Maryland, historical trends in forest land, and the numerous laws, regulations, and programs that impact forest land. Armed with this base of information and the diverse expertise of members, the task force discussed issues, gaps, implications of various approaches, and potential actions to achieve a no net loss of forest land. Based on information and discussion from the first meeting on forest land status and trends, the task force staff drafted a working "findings" document that formed the basis for future deliberations.

Subsequent meetings focused on regulatory programs, non-regulatory options and incentive-based opportunities to support conservation of existing forest land. After each successive meeting recommendations were developed and refined. Draft reports were circulated electronically for refinement on several occasions from mid December through mid January. The final document represents a consensus position of task force members.

No Net Loss of Forests Task Force

Findings

1. Forests provide an abundance of necessary ecological services including nutrient reduction/uptake, stream bank stabilization, thermal buffering of streams, wildlife habitat, carbon sequestration, erosion control, flood control, and water and air filtration.
2. Forests provide an abundance of societal benefits: shade, open space, quality of life, aesthetics, existence values, and recreational opportunities.
3. Forests are the natural land cover of the Chesapeake Bay watershed and their existence is key to restoring the health of Chesapeake Bay.
4. Forests provide an abundance of economic benefits: the forest industry is the fifth largest in the state, employing 14,000 people and providing \$2.4 billion to Maryland's economy, renewable energy, potential future markets for nutrient, carbon or water credit trading as well as ecological services.
5. Forests continue to face numerous threats from insects and disease, invasive plants and animals, unsustainable wildlife populations (e.g., deer) and development (residential, commercial, and utilities and transportation infrastructure). Forest land continues to be lost annually.
6. Forests are becoming increasingly parcelized and at greater risk of future land use conversion. There are over 156,000 owners of forest land in Maryland. Over 132,000 of these landowners own less than 10 acres each.
7. The future sustainability of Maryland's forest lands is dependent on private landowners. Individuals own 51% of Maryland's forest land, the public sector owns 20%, corporations own 18%, farmers own 10% and forest industry owns 1%.
8. Implementation of the Forest Conservation Act (FCA) has slowed the loss of forest land and has focused forested areas along stream valley corridors where water quality benefits can be most effectively realized.
9. Maryland needs to move toward a No Net Loss of forests as a strategic component in the effort to restore the health of the Chesapeake Bay and its watershed and promote the economic well-being of rural Maryland with strategies and policies that measurably contribute to enhanced forest land retention and improved forest land stewardship without negatively impacting productive agricultural lands. Such efforts must be conservation oriented rather than preservation oriented in nature to be able to sustain native plant communities in a developed landscape.
10. The practice of land planning and development is changing in a manner that is expected to increase forest cover. As areas that were built prior to the Forest Conservation Act and have no forest cover redevelop, the afforestation requirements will result in a net forest increase.
11. Urban and street trees provide ecological and societal benefits and are an important part of Maryland's forest resources.

Defining Forests

For the Task Force, *forests* are defined as a biological community dominated by trees and other woody plants with an area of 10,000 square feet or greater, or which formerly had such a biological community and is not currently developed, cleared for agricultural use, or otherwise converted from forest use. Coverage by crowns of trees and woody plants should be at least 10% of the area, or have 100 trees per acre or greater with at least 50% of those trees 2 inches or greater in diameter at 4 ½ feet above ground level.

Forests are expected to be capable of normal forest ecological processes including carbon and nutrient cycling, and to have the potential to regenerate themselves under normal conditions. Forests should also display natural forest structure and habitat from forest floor to shrub and intermediate layers and into the forest canopy. They include areas that have been cut but not cleared (i.e., stumps and root mats intact) and do not include orchards or lawns.

Urban tree canopy is considered to be trees growing individually, in small groups, or under forest conditions on public and private lands in our cities, towns, and their suburbs. Tree canopy is the layer of tree leaves, branches, and stems that cover the ground when viewed from above.

Defining No Net Loss of Forests

The Task Force considered a No Net Loss goal to be primarily keeping the current acreage of forest in Maryland, but also discussed related issues of distribution in the state and quality of forests replacing those cleared. The impetus for maintaining the current area of forest in Maryland is related to the many benefits received from the forests, which depend on these distribution and quality factors. However, tracking acreage of forests statewide is the first necessary step, and needs to be done well to allow distribution and quality to be considered.

Tracking a No Net Loss goal requires setting a baseline, identifying an appropriate scale of resolution, and establishing a consistent, accurate, and timely data source for forest acreage. For statewide coverage, remote sensing is the most cost-effective type of option. In this situation remote sensing of forest cover will follow the Anderson land use/land cover classifications system. Level II classifications include coniferous, deciduous, mixed forest, and scrub/shrub types.

Measuring Progress

Baseline

In order to track the net loss or gain of forest cover, a baseline is needed to comparatively measure success. The most widely used standard for land use/land cover classification is the Anderson levels; Anderson Level II classification identifies categories for coniferous, deciduous, mixed forest, and scrub/shrub types that can be used in the baseline estimates. A 2007 land use land cover layer has been completed by Maryland Department of Planning and is expected to be through review in January 2009. Until that more recent information is available, the 2002 data will be used, 2,578,099 acres of forest in Maryland, 41.3% statewide (Fig. 3). More precise forest area is under development based on the 2007 National Agricultural Imagery Program

(NAIP) data, acquired with the infrared band needed to better distinguish vegetation types and detailed one-meter resolution. It is acquired on an ongoing basis, and only needs supplemental purchase of the infrared band for it to continue to be useful for forest cover estimation and urban tree canopy assessment. Other technical solutions that offer one-meter resolution or better may be developed to give adequate resolution in the future. Issues with NAIP include a 1.5 year processing time for detailed imagery, problems with excessive shadow in mountainous areas depending on time of day of the photography. Current rates of change in forest area are based on periodic land cover classification, and have been consistently showing annual losses of forest cover (Fig. 4, Fig. 5). Rates of loss appear to have slowed following the 1991 adoption of the Forest Conservation Act.

Scale, Frequency, and Distribution

When fine-resolution forest cover is available for Maryland, the desired minimum tracking unit for Maryland is 0.25 acres. Estimates should be produced at least every 5 years, with annual tracking encouraged as resources permit. The 2002 MDP data offers 10-acre mapping units, and will be used until more precise products are available. To maintain the benefits of forest cover and urban tree canopy statewide, sub-goals can be set for a smaller area such as counties (Figure 1) or Tributary Basins (Figure 2). Non-Chesapeake drainage areas (parts of Garrett, Worcester, and Cecil Counties) could be added to adjacent Tributary Basin areas to create some flexibility in offset areas. Sub-goals for forest cover could be reflected in local Land Preservation, Park, and Recreation Plans (Natural Resources Sections), and priorities for retaining key forests, including buffers, forested wetlands, and unique forest types, could be reflected in Sensitive Area Elements and Water Resource Elements of Comprehensive Plans. Regional or statewide mitigation could be established as a backup option where within-jurisdiction mitigation is not feasible through on-site, off-site, or fee-in-lieu options. Tracking of newly planted areas should be tracked separately (e.g., through FCA and tree planting reporting) to allow consideration of young forests not visible yet on remotely sensed imagery (e.g., Fig. 6).

Monitoring and Data Management

Forests protected from conversion to developed land uses should be reported annually to the nearest acre for the Chesapeake Bay Program Forest Conservation Directive. Newly planted forest may be used, although if planting is for mitigation, only acres in excess of that cleared on the project may be used. Geographic locations and acreages will be included in reporting.

Urban Tree Canopy (UTC)

The task force identified a number of issues and recommendations unique to Urban Tree Canopy. While not meeting the full definition of forest noted above, UTC plays important roles in urban and suburban environments. The task force identified specific criteria to be incorporated into UTC measurement and goal setting, consistent with Chesapeake Bay Program criteria.

Canopy Assessment:

Maryland DNR working with communities and other partners to assess tree canopy should:

- Use remote sensing data with one meter resolution (or greater);
- Use data that was initially acquired/captured within the last five years;
- Clearly define geographic boundaries of the assessment;
- Include the percent land cover types, percent of land with tree canopy, percent imperviousness, and priorities for canopy enhancement; and
- Update the assessment every 5-10 years.

Goal Setting:

Communities setting tree canopy goals should:

- Adopt a local goal to *increase* tree canopy;
- Outline a defined timeframe for attainment of the goal; and
- Be developed by locally elected officials, local governing body for non-incorporated jurisdictions, non-profit organizations, or other entities.
- Sub-goals may also be established for specific units within the community's geographic area such as parking lots, riparian forest buffers, public streets, public lands or industrial/commercial/institutional areas.

Implementation:

A communities' implementation plan for enhancing urban tree canopy should include:

- The percent increase in canopy cover and specified time intervals for attainment;
- The relationship of the canopy goal to other local goals, ordinances or regulations;
- Identification of priority sites for implementation (e.g., tree planting) and rationale for selection; and,
- Any resolutions, motions or minutes from governing bodies or boards endorsing the participation in the program, the goals set by the community and plans for implementation.

Reporting, Evaluation, and Monitoring:

Maryland DNR should report the following accomplishments annually:

- Identification of communities that have approved through their elected officials or governing body, their willingness to implement an assessment, set local canopy goals, and develop a plan that identifies measures to attain those goals;
- Tree canopy assessments completed and associated findings;

- Tree canopy goals established and approved;
- Implementation plans developed and approved; and
- An evaluation of each selected community's progress towards completion of an assessment, goal setting, plan development, and implementation. Maryland DNR will incorporate an evaluation method that includes measurable indicators with which to gauge progress such as number of trees planted, canopy lost, or forest acres protected from development (e.g., conservation easements).

“Community” Definition:

- An urban place as defined by the US Census; or
- An incorporated municipality; or
- Any other community of place (not a municipality, but a geographic community that is a legal entity).

Forest Conservation Considerations and Methods

In evaluating options for achieving a No Net Loss of Forests the task force evaluated a number of mechanisms, including existing regulatory and non-regulatory programs.

Regulatory Programs:

- State laws – Forest Conservation Act, Roadside Tree Law, Reforestation Law, Seed Tree Law, Public Service Commission (utility corridors), Chesapeake Bay Critical Area Program.
- Local laws – Forest Conservation Act and Critical Area law language in ordinances and planning and zoning requirements.

Non-Regulatory Programs:

- State and federal incentives - Various voluntary programs including *Treemendous Maryland*, *Marylanders Plant Trees*, and numerous rural forest and farm landowner incentive and assistance programs.
- Local programs - Voluntary tree planting programs (i.e., Baltimore County's Growing Home campaign, Annapolis' Greenscape Program.)
- Education and Outreach – Efforts to instill a stewardship and conservation ethic in the general public
- Urban trees and Urban Tree Canopy (UTC) goals - The *Marylanders Plant Trees* program has a goal of 74 communities committing to and achieving an Urban Tree Canopy goal.

The task force also considered existing funding options, including:

- Federal – Farm Bill financial assistance programs and the Regional Greenhouse Gas Initiative opportunities
- State – Woodland Incentive Program, property tax incentives and credits
- Local – fee-in-lieu mitigation – seeking ways to make better use of or use in a different manner

Recommendations

Recommendations include suggested changes to both regulatory and non-regulatory approaches. Regulations do not cover every area in which trees are cleared, so a broader view is required for statewide action. The most detailed recommendations are offered for the Forest Conservation Act, although all the programs listed above were reviewed.

Regulatory Programs / Actions

Forest Conservation Act

- Eliminate the exemptions for projects licensed by the Public Service Commission. [NRA 5-1604(f)]; but provide full-rate recovery for the impacted utility.

Results: These projects will be required to comply with the FCA and its required mitigation.

- Eliminate the exemption for electric generating stations licensed by the Public Service Commission. [NRA 5-1602(b)(5)]; but provide full-rate recovery for the impacted utility.

Results: These projects will be required to mitigate for forest loss during powerline construction/expansion, slated to cover significant acreage in MD.

- Narrow the exemption for intrafamily transfers to eliminate “family subdivisions” [NRA 5-1602(b)(9)].

Results: The exemption would be as originally intended, to allow for one generation to transfer land to another generation, but prevent past abuses that have in essence bypassed the Act.

- Lower the allowable forest area to be cleared under an exemption from 40,000 square feet to 20,000 square feet. [NRA 5-1602(a) and (b)].

Results: Will increase areas subject to the Act and provide incentives on individual lots to clear no more than 20,000 square feet of forest rather than 40,000 square feet of forest for the construction of a residential dwelling and the associated infrastructure (driveway, septic, phasing area).

- Modify offsite retention mitigation language to allow areas temporarily protected to be used as mitigation. The current language does not allow areas that are “currently protected” to be used. [NRA 5-1607(b)(2)(ii)].

Results: This would enable existing forest that is temporarily protected to be perpetually protected. (For example, lands enrolled in 15-year term easement programs like Forest Conservation Management Agreements and Conservation Reserve Enhancement Program lands.)

- Modify the priority areas for retention and protection language to prevent disturbance to these areas, including stream buffers, wetlands, and rare species habitat.

Results: Would provide greater protection for the most sensitive lands.

- Modify the exemption for “previously developed and covered by paved surface” exemption to require tree canopy [NRA 5-1603(c)(3)(ii)(2)].

Results: Would help mitigate pre-existing water quality concerns and contribute to urban canopy during development.

- Modify the language requiring the local authority amend ordinances, policies and procedures that are inconsistent with FCA. [NRA 5-1603(c)(3)(i)].

Results: Would enable the MD DNR to address urban tree canopy concerns and renewable energy concerns.

- Modify the Fee-in-lieu fund by increasing the minimum amount from \$0.10 to \$0.30 per square foot by both the state and local government. [NRA 5-1610(b) and (g)].

Results: Would bring the fee-in-lieu amount more in line with current costs. The fee-in-lieu minimums have not been raised statewide since 1991.

- Modify the Fee-in-lieu fund to allow its use for maintenance of existing forested areas and to accomplish established urban tree canopy goals by both the state and local government. [NRA 5-1610(e)].

Results: Would allow greater use of the funds and would allow the fund to reflect the goals of the local government.

- Add or modify language that would enable timber harvesting in easement areas.

Results: Would allow sustainable forest management to occur that can maintain forest health over time.

Other Local and State Provisions

The most fundamental approach to conserving forests is to direct development to areas where adequate infrastructure for growth (water, sewer, roads, and the like) already exists.

- Provide incentives to encourage local governments to employ regional development patterns to protect contiguous forests and other natural areas.
- Require consideration of clustering where forest is part of a block 50 acres or more, or part of the State Green Infrastructure Hub or Corridor.
- Trade density to protect existing forest land and allow more compact development elsewhere.
- Require that a Forest Resource Element be developed for local Comprehensive Plans; which in municipalities can be written as an Urban Tree Canopy Element. The Department of Natural Resources should work with the Maryland Department of Planning to develop basic guidance for the scope of the forest element.
- Even in Priority Funding Areas, continue to emphasize riparian and floodplain protection, and augment urban forest canopy for air/water quality benefits.
- Establish a Regional Mitigation banking option, including:
 - Coordination and targeting high priority locations to augment Maryland GreenPrint;
 - Allowing participation by multiple programs to provide greater incentives to landowners to participate; and
 - Supporting development of mitigation banks with technical assistance.
- Adjust state inheritance/estate taxes to increase the possibility of forested land being transferred to the next generation, thereby increasing the potential for keeping land in forest, with equivalent provisions for other working lands like agriculture.

Non-Regulatory Reforestation / Afforestation Programs

Maryland is fortunate to have a number of voluntary programs that offer financial and technical assistance to expand and improve forest in the State, and a new effort to expand urban tree canopy. Recommendations focused on making better use of these programs and expanding funding levels to more effective levels.

State Tree planting programs

- Ensure sufficient program funding for tree planting and public outreach, particularly resources needed to adequately develop *Marylanders Plant Trees* in the Governor's Smart, Green and Growing Initiative.

- Develop the Citizen Component – helping individuals planting trees on house lots.
- Expand plantings through the *TreeMendous Maryland* program on public land.
- Assist communities in developing Urban Tree Canopy goals, with a statewide goal of 74 communities with UTC expansion goals.
- Continue and bolster assistance for private rural tree planting and care, including:
 - WIP – Woodland Incentive Program;
 - LIP – Landowner Incentive Program for rare species habitat;
 - PFW – Partners for Wildlife for habitat improvement; and
 - WHIP – Wildlife Habitat Improvement Program.
- Support an aggressive public land tree planting effort
 - Forest Brigade – a program in which Maryland Department of Corrections inmates plant trees on State land under the guidance of the Department of Natural Resources. A goal of planting 1,000,000 trees by 2011 has been established.

Local Tree Planting Programs

- Continue support for and expand where possible effective local programs for conserving and planting trees, through coordination, outreach, partnerships, and support for continued grant funding. Examples include:
 - Growing Home urban tree canopy planting and Rural Residential Stewardship buffer reforestation in Baltimore County;
 - Backyard Buffers programs in Special Rivers and Potomac Watershed grants; and
 - Annapolis Greenscape Program.

2008 Farm Bill Enhancements

- Effectively use Chesapeake Bay enhancements in Farm Bill funding to implement forest plantings and conserve forest health, including:
 - - CREP – Conservation Reserve Enhancement Program; and
 - EQIP – Environmental Quality Incentive Program

Non-regulatory Conservation and Market Development for Existing Forest

There are numerous options for conserving existing forest, most of which could be made to protect more forest acreage by changing elements or eligibility within the programs. Many require legislative action to carry out the suggested changes.

Landowner incentives

- Easements:
 - Maryland Agricultural Land Preservation Foundation (MALPF) - Modify statute to include class IV soils for forests to allow important forest blocks to qualify for easement purchase; and
 - Assure that conservation easements allow sustainable forest management under a forest management plan.
- Property tax reduction on forested land:
 - Decrease minimum acreage for Forest Conservation Management Agreements (FCMA) from 5 to 3 acres leading to greater opportunity for participation.
- Income tax modification:
 - Extend Income Tax Treatment of Reforestation and Timber Stand Improvement (TAXMOD) credits for reforestation expenses to include preparation of forest stewardship plans or costs of implementing harvesting Best Management Practices beyond minimums, similar to Virginia's expanded buffer program; and
 - Expand credits and period for claiming credits for donated easements.
- Target and enhance landowner incentives to encourage sustainable forestry:
 - Enhance technical assistance delivery for private forest owners;
 - Expand opportunities for landowners to certify forest land as sustainably managed.
 - Audit "current use" tax programs and forest stewardship program for use as group certification. Group certification can also serve to aggregate landowners for ecosystem markets; and
 - Support Forest Conservancy District boards, Resource Conservation and Development Districts (RC&Ds), and non-profit partners to provide resources to landowners and catalyze action.
- Provide start-up capital for Maryland Agricultural and Resource Based Industries Development Council's (MARBIDCO) Sustainable Forestry Emergency Loan fund. Revolving loan fund will provide low-interest loans to qualified landowners who are faced with a sudden need for cash (e.g. healthcare expenses) to lower the risk of land conversion.
- Augment land conservation funding by establishing clear authorization for local bonds or fees for local land conservation. Provide uniform enabling authority to local governments (county or municipal authorities) to raise money for forest and land conservation by establishing a dedicated revenue source, coupled with State incentives such as reliable matching funds through existing state land conservation programs (Program Open Space,

Rural Legacy, MALPF or other comparable program), sanctioning the cost-effective leveraging of existing State funds by extending the reach of State dollars invested in forest and land conservation.

- Develop private sector markets for an expanded set of forest product and services, including carbon, water, energy/biomass, ecosystem services. Target landowner outreach to landowners enrolled in the Bay Bank, the Chesapeake region's multi-credit ecosystem marketplace, establishing a means to improve knowledge of programs and eligibility for their lands.
- Establish managed woodland zones/forest economic resource areas:
 - Accompanies green infrastructure and strategic forestland assessment programs;
 - Within these zones avoid mitigation on prime agricultural land, target stream buffers;
 - Use income tax credits to ease acceptance by landowners; and
 - Ask landowners commit to implementing a forest stewardship plan and sustaining the forest use for 10 years
- Target and enhance industry incentives to zones to encourage sustainable forestry
 - Establish timber industry as a state "growth industry";
 - Establish financial incentives to increase use of low-value wood and biomass
 - Promote “green” policies in Maryland that focus on forestry residues/by-products for renewable energy production and use of materials in public construction (i.e. use Maryland-based wood in bridge and sound barrier projects); and
 - Bolster sawmills and other declining industry through funding of DNR’s forest marketing and utilization program.

Table 1: Forest cover in Maryland by Tributary Basins and Counties

FOREST COVER STATISTICS FOR MARYLAND						
TRIBUTARYWIDE				COUNTYWIDE		
TRIBUTARY	ACRES ^{1, 3}	PERCENT		COUNTY	ACRES ^{1, 3}	PERCENT ²
YOUGHIOGHENY	165,900	62%		Allegany	207,090	76%
				Anne Arundel	108,650	41%
UPPER POTOMAC	629,820	48%		Baltimore	129,410	34%
				Baltimore City	3,730	7%
CHRISTIANA	1,140	22%		Calvert	69,520	50%
				Caroline	63,650	31%
UPPER WESTERN SHORE	207,800	33%		Carroll	67,810	24%
				Cecil	84,830	38%
MIDDLE POTOMAC	114,560	28%		Charles	178,640	61%
				Dorchester	126,770	36%
COASTAL BAYS	44,480	18%		Frederick	145,370	34%
				Garrett	289,620	70%
UPPER EASTERN SHORE	175,850	24%		Harford	95,750	34%
				Howard	49,620	31%
CHESAPEAKE BAY	810	0%		Kent	44,700	25%
				Montgomery	91,870	29%
CHOPTANK	119,620	23%		Prince George's	131,380	42%
				Queen Anne's	63,070	26%
LOWER EASTERN SHORE	416,080	37%		Somerset	82,660	39%
				St. Mary's	118,510	51%
LOWER POTOMAC	270,000	37%		Talbot	41,450	24%
				Washington	117,050	40%
PATAPSCO/BACK	108,880	25%		Wicomico	106,250	44%
				Worcester	159,770	53%
PATUXENT	246,880	40%				
LOWER WESTERN SHORE	75,430	39%				
STATEWIDE		ACRES ^{1, 3}		2,577,500		
		PERCENT		41.3%		
¹ Acres of forest were estimated from 2002 Maryland Department of Planning Landcover/Landuse Anderson Level II forest codes (41, 42, 43, 44).						
² Total land area for Counties from US Census Bureau Quick Facts for Maryland Counties 2000.						
³ The minimum mapping unit is 10 acres						

Table 2: Communities that have established a UTC goal or are in the analysis phase.

Community	County	Written Commitment	Date	Assessment status	Goal Set	Goal %
Annapolis	Anne Arundel	Y	2005	Complete	Y	50%
Arbutus	Baltimore	Y	2006	Complete	N	
Baltimore	Baltimore City	Y	2005	Complete	Y	40%
Bowie	Prince George's	Y	2007	Underway		
Bowleys Quarters	Baltimore	Y	2006	Complete	N	
Carney	Baltimore	Y	2006	Complete	N	
Catonsville	Baltimore	Y	2006	Complete	N	
Cockeysville	Baltimore	Y	2006	Complete	N	
Cumberland	Garrett	Y	2006	Complete		
Dundalk	Baltimore	Y	2006	Complete	N	
Edgemere	Baltimore	Y	2006	Complete	N	
Edmonston	Prince George's	Y	2007	Underway		
Essex	Baltimore	Y	2006	Complete	N	
Frederick	Frederick	Y	2007	Draft Assessment	N	
Garrett Park	Montgomery	N				
Garrison	Baltimore	Y	2006	Complete	N	
Greenbelt	Prince George's	Y	2007	Underway		
Hampton	Baltimore	Y	2006	Complete	N	
Hyattsville	Prince George's	N	2008	Complete	N	
Kingsville	Baltimore	Y	2006	Complete	N	
Landsdowne-Baltimore Highlands	Baltimore	Y	2006	Complete	N	
Lochearn	Baltimore	Y	2006	Complete	N	
Lutherville-Timonium	Baltimore	Y	2006	Complete	N	
Mays Chapel	Baltimore	Y	2006	Complete	N	
Middle River	Baltimore	Y	2006	Complete	N	
Milford Mill	Baltimore	Y	2006	Complete	N	
Overlea	Baltimore	Y	2006	Complete	N	
Owings Mills	Baltimore	Y	2006	Complete	N	
Parkville	Baltimore	Y	2006	Complete	N	
Perry Hall	Baltimore	Y	2006	Complete	N	
Pikesville	Baltimore	Y	2006	Complete	N	
Randallstown	Baltimore	Y	2006	Complete	N	
Reisterstown	Baltimore	Y	2006	Complete	N	
Rockville	Montgomery	Y	2006	Underway		
Rosedale	Baltimore	Y	2006	Complete	N	
Rossville	Baltimore	Y	2006	Complete	N	
Towson	Baltimore	Y	2006	Complete	N	
White Marsh	Baltimore	Y	2006	Complete	N	
Woodlawn	Baltimore	Y	2006	Complete	N	

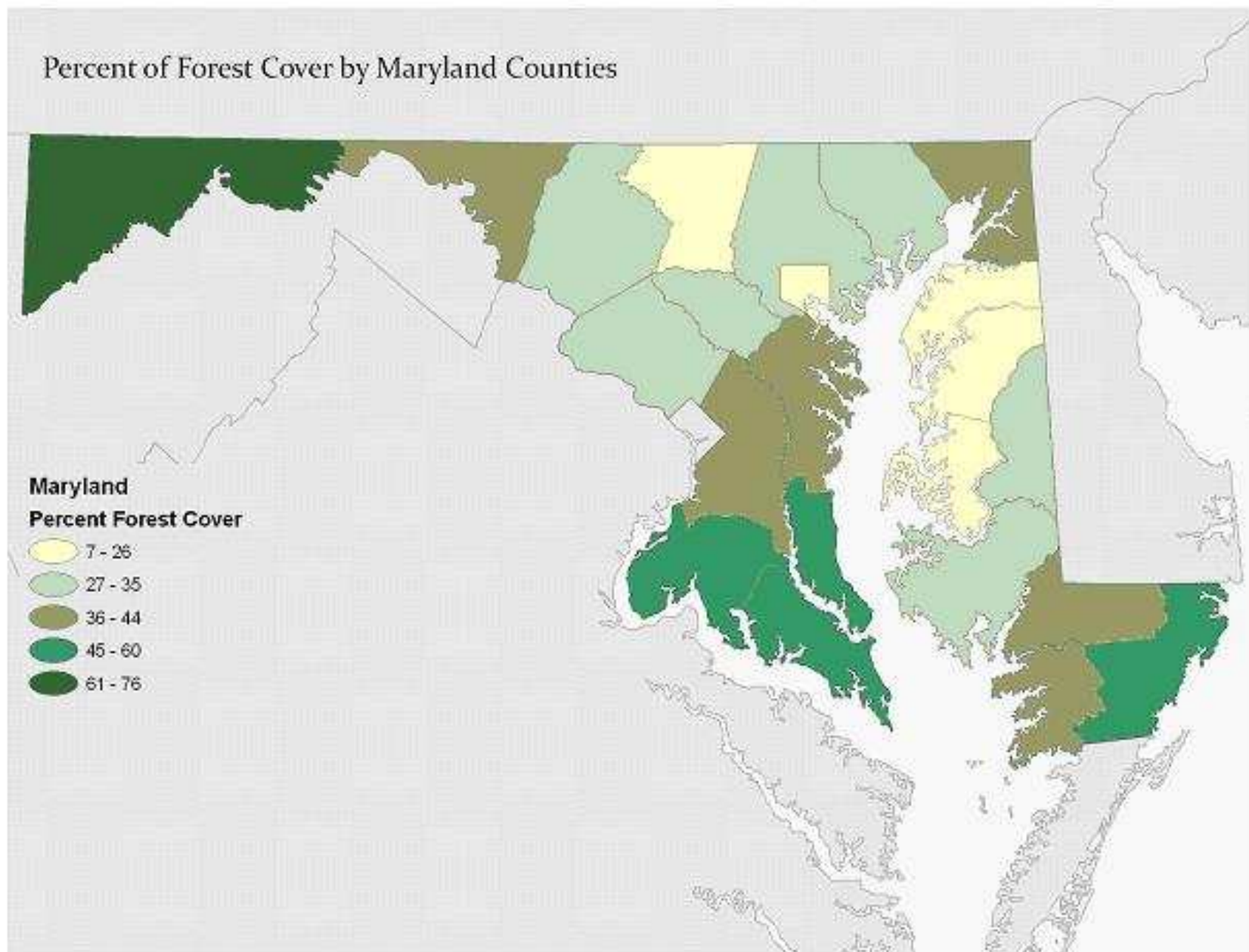


Figure 1: Forest Cover of Maryland Counties (see Table 1 for percentages and acreages)

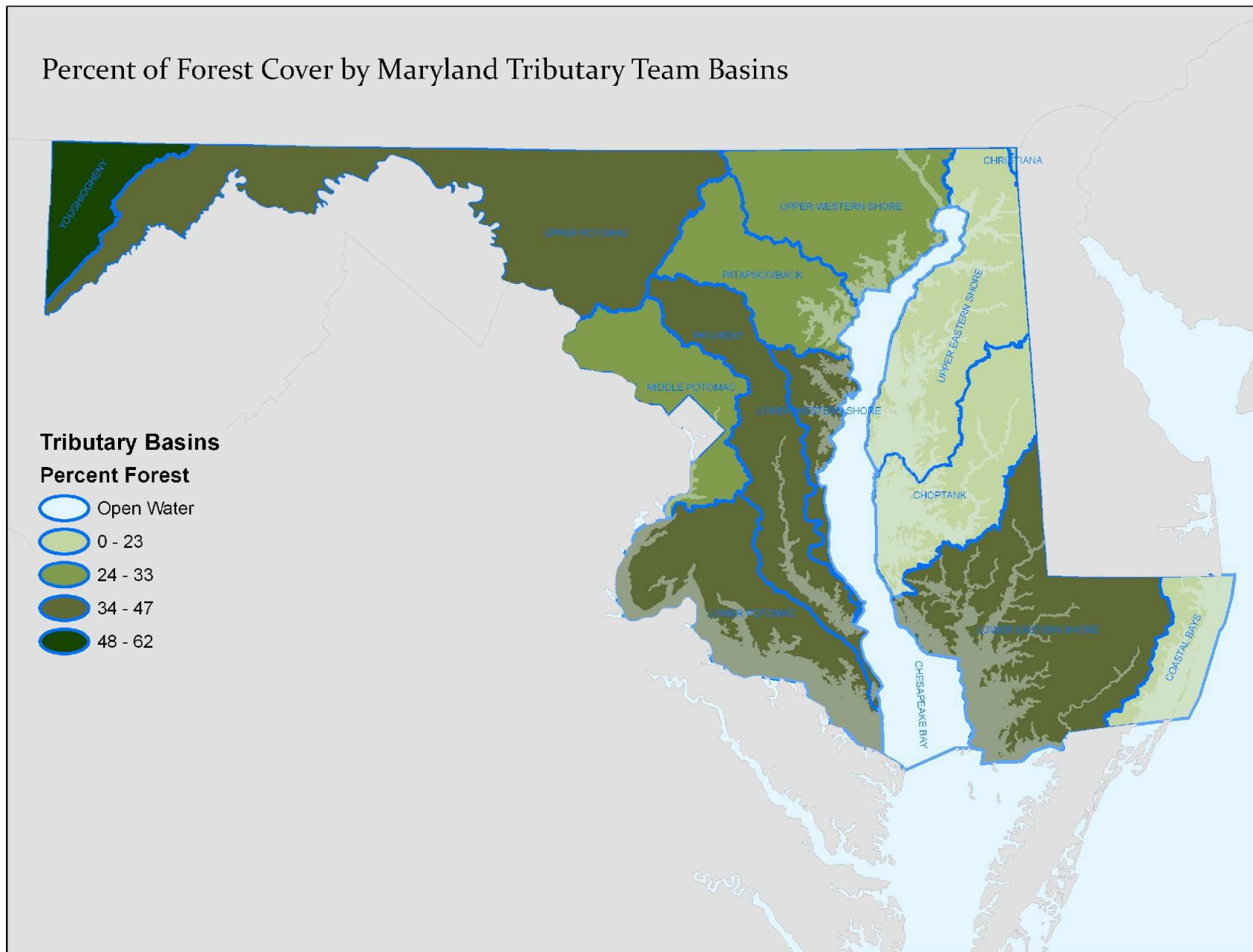


Figure 2: Forest Cover in Maryland by Tributary Basins (see Table 1 for percentages and acres)

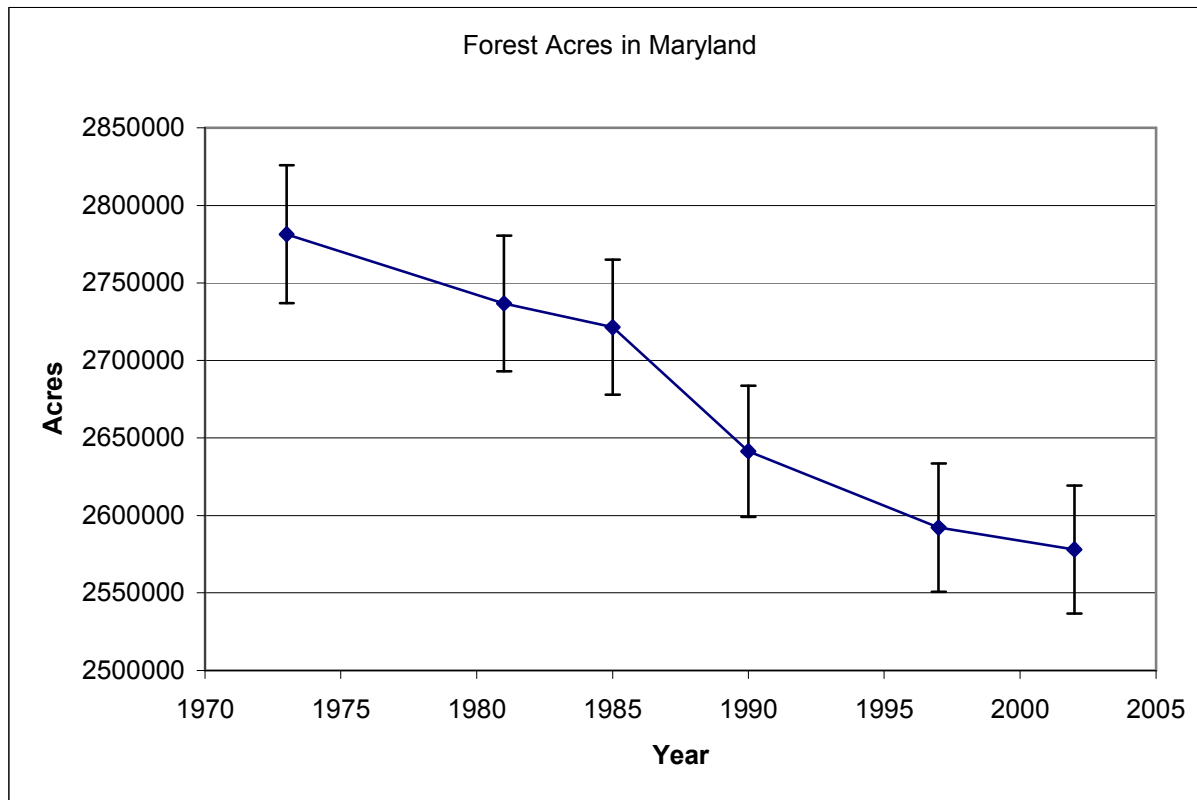


Figure 3: Acres of forest cover in Maryland, 1973 to 2002

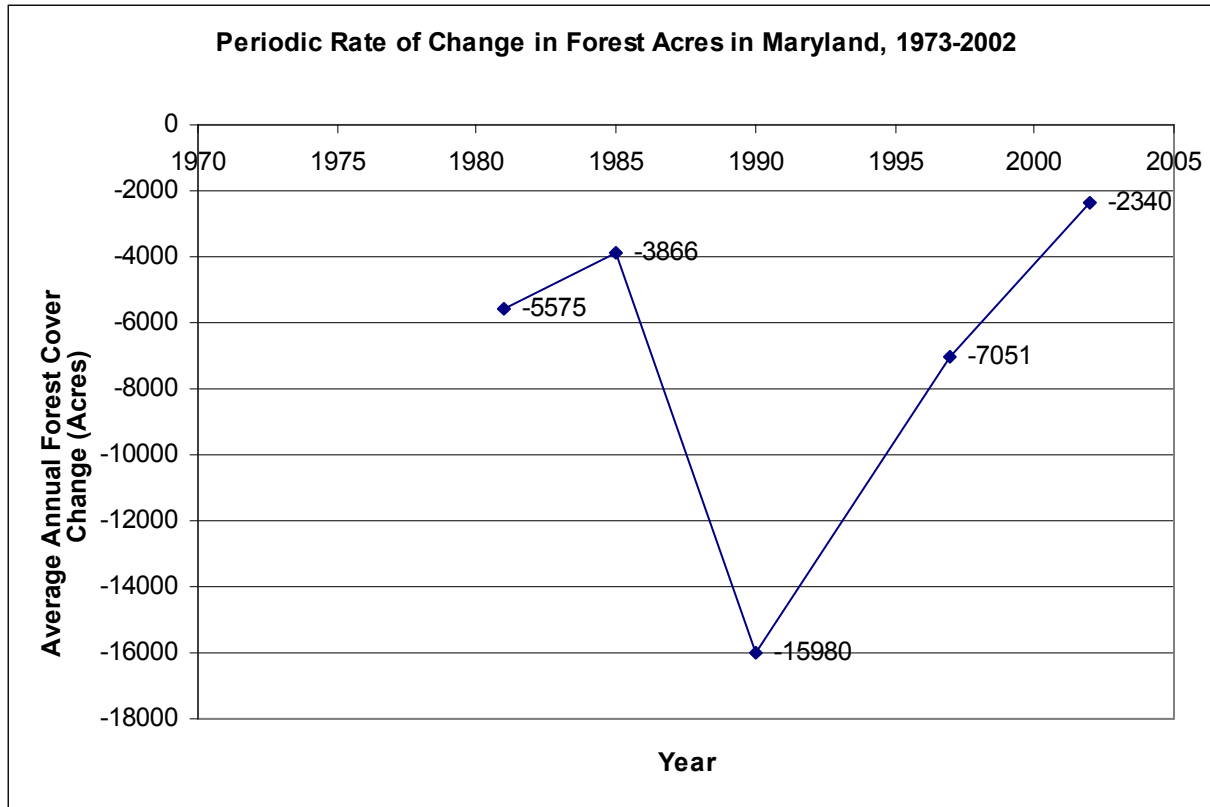


Figure 4: Annual percentage change of forest cover in Maryland, 1973 to 2002

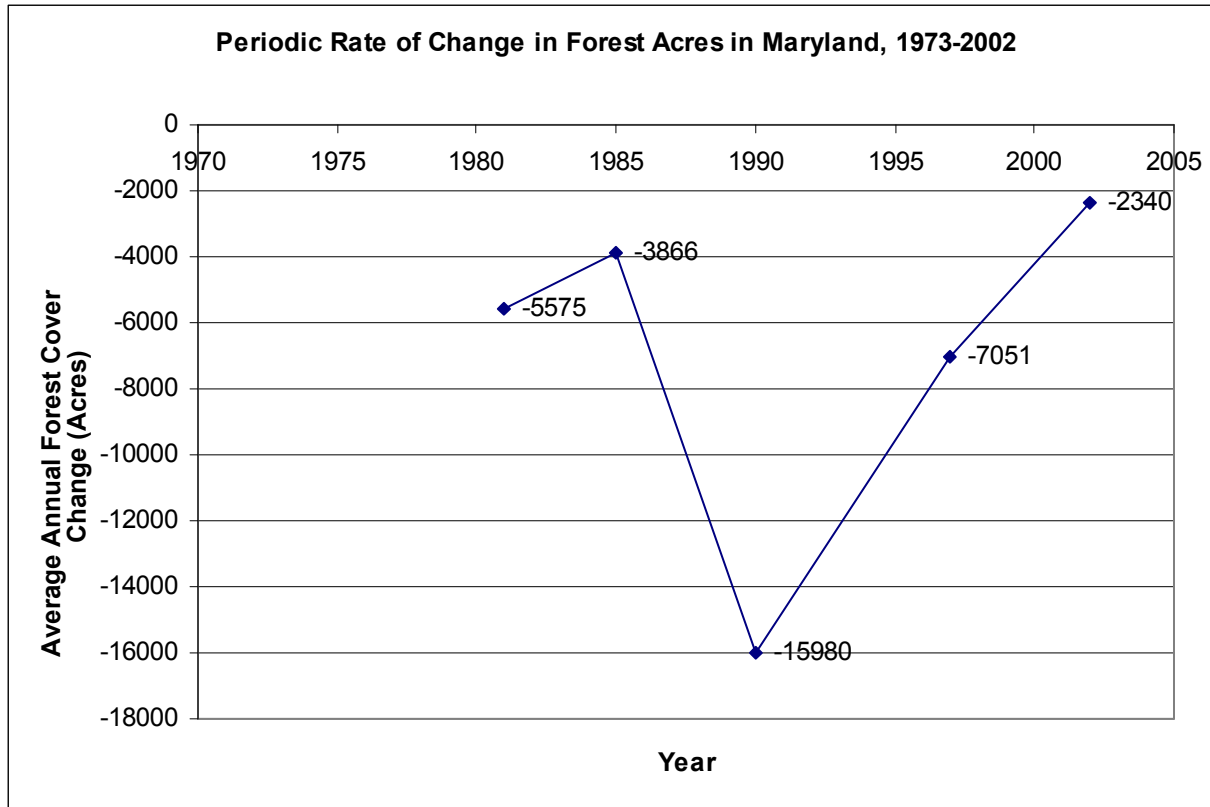


Figure 5: Acreage change of Maryland forests, 1973 to 2002

